CHLORIDE

Secure Power Always

ONEAC® FA Filter Three-Phase Power Filter (30 - 200 Amps)

FA23030 (026-005)

FA63030 (026-075)

FA23060 (026-060)

FA63060 (026-076)

FA23100 (026-070)

FA63100 (026-077)

FA23200 (026-011)

FA43200 (026-012)

FA63200 (026-078)

User manual

Introduction

Thank you for selecting this Chloride product. This ONEAC brand power filter offers reliable protection from the harmful effects of electrical line disturbances.

Registering your product

To register your FA Power Filter, please complete the warranty registration card included with your filter or online at www.chloridepower.com/usa. From the product page, go to product registration.

About this manual

IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS.

Please read and save these instructions. This manual contains important instructions for the ONEAC FA Power Filter. Follow these instructions during the unpacking, installation, and maintenance of the filter. If you have a problem with the filter, please refer to this manual before calling Technical Services.

Technical Services

Chloride offers 24-hour technical support. To contact technical services:

North America: toll free (800) 327-8801 (Opt 3),
local (847) 816-6000 (opt 3)

email: us.service@chloridepower.com

Please check with Technical Services before attempting to return any Chloride product under warranty. If a Chloride product needs repair or replacement, Technical Services issues a Return Material Authorization (RMA) number along with instructions on how to return the product.

Dangerous voltages are present within this unit. There are no user serviceable parts within this unit; therefore, any repairs or modifications may result in out-of-warranty repair charges, unsafe electrical conditions, or violation of electrical code.

Sizing information

The rating label of your filter is located on the inside of the door. The rating label lists the FA model's current rating, nominal input and output voltage and serial number. Verify that the voltage and current specified on the rating label are appropriate for your application. The combined steady state RMA current draw of all your equipment must not exceed the filter's output current rating on any of the three phases.

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Installation

Installation overview

NOTE: Only qualified electricians should install an ONEAC FA Filter.

Follow the National Electrical Code®, local codes, good wiring practice and the user manual.

1. Unpack the filter. See "Unpacking and placement" on page 8.
2. Position the filter correctly within the enclosure.
3. Mount the filter at the installation location and punch conduit holes for the input and output. See "Mounting" on page 9.
4. Connect the input wires. See "Input and output connections" on page 11.

   Connect the ground connection first. Use a grounding conductor that is equal to or larger than the current carrying conductors.
5. Verify the correct operation of the filter. See "Verifying your installation" on page 7.
6. Connect your equipment to the output. See "Input and output connections" on page 11.

   Use **steel** wall conduit or steel flexible conduit with a continuous copper ground.

   Do not connect a neutral wire to the output of a delta connected unit.
7. Turn on the equipment protected by this filter.
8. Start normal operation of your system.

Important installation guidelines

CAUTION: *RISK OF ELECTRIC SHOCK —EXPOSED LIVE PARTS. Switch off at power source and wait ten seconds before removing or replacing components. Installation and maintenance to be carried out by qualified electrician.*

ATTENTION: *RISQUE D'ÉLECTROCUTION - PARTIES VIVANTES EXPOSÉES. Éteignez la source d'alimentation et attendez 10 secondes avant d'enlever ou de remplacer des composantes. L'installation et l'Entretien doivent être réalisés par un électricien certifié.*

WARNING:

Only qualified electricians should install or retrofit this filter.
This filter contains DANGEROUS VOLTAGES.

Accidental contact can result in serious electrical shock.

High leakage current.

Ground connection is ESSENTIAL before connecting supply.

ATTENTION:

Seulement les électriciens qualifiés devraient installer ou mettre à niveau ce filtre.
Ce Filtre contient des VOLTAGES DANGEREUX.

Le contact accidentel peut entrainer un choc électrique majeur.

Fort courant de fuite.

Le branchement de la mise à la terre est essentiel avant la mise en servce.

Always follow the National Electrical Code® or your local electrical codes and good wiring practice.

This filter is three-phase and wired in a "DELTA TO DELTA" or a "WYE TO WYE" configuration. See figure below.

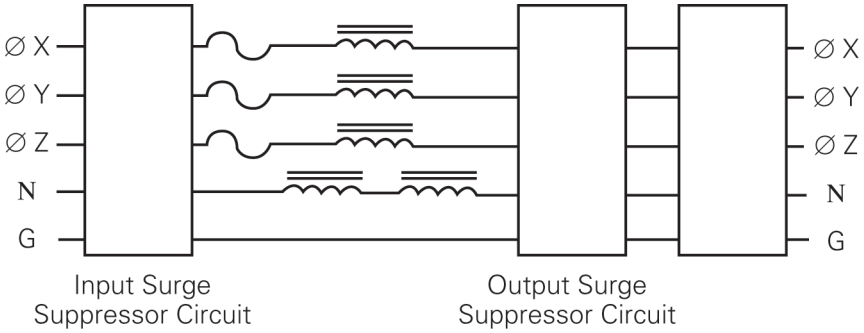

fig. 1. Wiring circuit for the FA Three-Phase Power Filter

NOTE: DO NOT connect a neutral wire to the output of a "delta to delta" configuration.

Physically separate the input power connections to the filter from the equipment power connections on the output.

Data cables should be kept as far away as possible from any power cables.

For maximum performance:

- Use steel wall conduit or flexible steel conduit with a continuous copper ground between your equipment and the filter.
- Always include a ground wire for each circuit on the output of the filter. DO NOT use an extension cord or power strips.
- DO NOT connect your equipment to the filter's output until the input connections have been made and proper filter operation has been verified.

Verifying your installation

1. Turn off the branch circuit feeding the filter. Verify that the installation follows the guidelines outlined in section entitled "Important installation guidelines" on page 5.
2. Turn on the main power source.

CAUTION: *DANGEROUS VOLTAGES ARE PRESENT.*

ATTENTION: *PRÉSENCE DE VOLTAGE DANGEREUX.*

3. Use a voltmeter to determine if voltage is present at the input and output terminals.

4. If the operating voltage matches that suggested by the device manufacturer, turn on the equipment and operate as usual.

   If the variation is greater than the manufacturer's specifications on any phase, a tap selection for that phase should be made to adjust the voltage level.

   If there is power at the input with no power at the output, turn off the branch circuit feeding the filter and follow the procedure in the section titled "Troubleshooting an installation" on page 33.

Installation and operation

Unpacking and placement

Your ONEAC FA Power Filter is delivered on a wooden pallet. Upon arrival, inspect the unit and pallet for signs of damage. Examine the encloser for dents or scratches and open the door to check for loose or broken parts.

If damage is detected, immediately contact the freight company and Chloride Technical Services. Chloride Technical Services can be reached at (800) 327-8801 (Opt 3) or (847) 816 6000.

Chloride recommends that your filter be left on the pallet during handling. Remove the filter from the pallet once it is as close to the final installation location as possible.

The actual physical placement of the filter should be as close as possible to the equipment being protected. The filter should be installed inside the room containing the equipment being protected. Consideration should be given to ease of access to the equipment and the conduit entry points. If the standard wall-mounting is not appropriate, an optional floor mounting kit is available.

Adequate ventilation is essential to prevent overheating, which could result in unnecessary operation of the main fuses. There should be at least six inches (150 mm) of unrestricted space at the top, bottom, and sides of the enclosure.

WARNING: *Models FA43200 and FA63200 have vented enclosures. Do not install models FA43200 and FA63200 in environments with high concentrations of dust and dirt.*

AVERTISSEMENT: *Les modèles FA43200 et FA63200 ont des ouvertures pour ventilations. N'installez pas les modèles FA43200 et FA63200 dans les evnironnements avec de hautes concentrations de poussière et de saletés.*

The filter can operate continuously at elevated ambient temperatures with the maximum current derated. For ambients above 25°C, derate the current 1% per additional °C to -15% maximum at 40°C.

Do not allow the filter to be installed where direct contact with water is possible.

Mounting

Inverting the filter

The ONEAC FA Filter is meant for permanent wiring of the input and output. The internal chassis can be inverted to supply top feed wiring. To invert the internal chassis:

1. Lay the filter on it back and remove the six nuts and washers.
2. Attach a suitable lifting device to the lifting holes on the internal chassis and carefully lift the chassis from the enclosure, keeping the chassis level as you slowly lift it.
3. Reinstall the washers and nuts after refitting the chassis to insure proper safety grounding for the enclosure.

Floor mounting the filter

The filter can be mounted on the floor using the kits listed below. All kits can be ordered from Chloride by calling 800-327-8801 or 847-816-6000.

Model (part number)	Floor-mount kit part number
FA23030 (026-005) and FA63030 (026-075)	350-091
FA23060 (026-060) and FA63060 (026-076)	350-073
FA23100 (026-070) and FA63100 (026-077)	350-046
FA23200 (026-011), FA43200 (026-012), and FA63200 (026-078)	350-064

The floor mount kit is supplied with the necessary hardware to bolt the mounting stand to the enclosure. Hardware to mount to the floor is not included.

WARNING: *Cover all the electrical components to protect from debris before using the floor mount template to mark and drill the necessary holes. Failure to do so may cause a serious electrical hazard.*

AVERTISSEMENT: *Couvrez toutes les composantes électriques pour protéger des débris avant de marquer et forer les trous nécessaires à l'installation. Ignorer cet avis peut entrainer de sérieux problèmes électriques.*

Once the location of your filter has been determined, permanetly bolt the enclosure in place. If the mounting is not flat, the door may not open and close properly. If the top of the door strikes the lip which extends around the body opening, place metal shims between the mounting at the bottom of the enclosure and closest to the door hinge. Be sure all mounting screws are tight.

Main input fuses

This feature is needed to protect your equipment and the ONEAC FA Power Filter. The branch circuit feeding the filter should have ratings which meet or exceed the fuses within the filter. Time-delay fuses are supplied as the main fuses within the filter. This allows for equipment with large inrush and surge current characteristics. Should this feature be required for your equipment, the branch circuit protective device(s) should also be suitably rated.

The ONEAC FA Power Filter's main input fuses can be replaced using the fuses listed below. Three fuses are needed for each filter.

Model	Fuse description	Manufacturer part number			
		Bussman	Littelfuse	Gould Shawmut	Reliance
FA23030	30 A, 250 V time delay	FRN-R-30	FLN-R-30	TR 30 R	ECNR 30
FA36060	30 A, 600 V time delay	FRS-R-30	FLS-R-30	TRS 30 R	ECSR 30
FA23060	75 A, 250 V time delay	FRN-R-75	FLN-R-75	TR 75 R	ECNR 75
FA63060	75 A, 600 V time delay	FRS-R-75	FLS-R-75	TRS 75 R	ECSR 75
FA23100	150 A, 250 V time delay	FRN-R-150	FLN-R-150	TR 150 R	ECNR 150
FA63100	150 A, 600 V time delay	FRS-R-150	FLS-R-150	TRS 150 R	ECSR 150
FA23200	200 A, 250 V time delay	FRN-R-200	FLN-R-200	TR 200 R	ECNR 200
FA43200	200 A, 600 V time delay	FRS-R-200	FLS-R-200	TRS 200 R	ECSR 200
FA63200	200 A, 600 V time delay	FRS-R-200	FLS-R-200	TRS 200 R	ECSR 200

Input and output connections

This product is meant for permanent wiring of the input and output.

Use the template provided to mark suitable locations for input and output conduits adjacent to the terminals—top, bottom, or through the rear of the enclosure.

CAUTION: *Do not fit conduits to any other face of the enclosure. Before proceeding, turn off the main power source supplying the filter at the service disconnect.*

ATTENTION: *Ne pas installer de conduit sur un autre côté. Avant de commencer, éteignez la source d'alimentation principale alimentant le filtre.*

WARNING: *Cover all electrical components before punching conduit holes. Debris around the electrical components may cause a serious electrical hazard.*

AVERTISSEMENT: *Couvrez toutes les composantes électriques avant de perforer les trous de conduit. Les débris autour des composantes électriques peuvent provoquer de sérieux problèmes électriques.*

Remove paint from around the hole on the inside of the enclosure to ensure good grounding of the conduit.

Install an appropriate conduit and fitting for the application.

Cable styles and minimum wire sizes should be appropriate for the current rating of the equipment, as defined by local and national regulations. Take into account any derating which may be necessary for special conditions. All installation practices shall be in accordance with such regulations.

UL Lised connectors are recommended for wiring connections on the input and output. Connectors with two holes are recommended for models FA23200, FA43200, and FA63200.

Use copper conductors only. Strip the insulation from the wire.

Ensure that all insulation is removed, that the conductors are clean with no conductor strand cut through, and that the stranding remains neatly twisted.

Use compression tools and dies suitable for the wire size and terminal used.

Ensure that the conductor reaches the end of the crimp barrel.

A well crimped terminal will have a smooth polished appearance where the die has compressed the terminal barrel. The crimped portion will match the shaped of the dies exactly (especially the angles), but there will not be excessive amounts of "flash" where the dies meet.

Use screws, bolts, and washers suitable for the terminals used. Connect the terminals to the terminal bars.

Phase rotation sequence is maintained by the ONEAC FA Filter. Using both mounting holes for models FA23200, FA43200, and FA63200.

Connect the input ground to the terminal block (G).

Heavy gauge wire, equal to or larger in diameter than the power carrying conductors should be used to connect the safety ground.

It is recommended that ground be wired back to the service ground.

WARNING: *Do not rely on the conduit alone for the connection to the ground. This filter may have high leakage current.*

AVERTISSEMENT: *Ne pas se fier uniquement sur le conduit pour la connexion de la mise à la terre. Ce filtre peut avoir un courant de fuite élevé.*

Chloride discourages the down sizing of grounding conductors as allowed by various codes.

If in doubt regarding wiring sizing, consult the National Electrical Code®, Table 310-16, or your local electrical code.

Connect the input phase wires to the input terminals, torquing each connection. Refer to the following chart for the torque specifications.

Follow the procedure in the "Verifying your installation" section on page 7.

The following table shows the recommended safe working torque specifications for the FA Power Filter.

Bolt/Screw size	Stainless steel		Brass	
1/2" (12 mm)	45 ft/lbs	61 Nm	35 ft/lbs	47 Nm
7/16" (11 mm)	33 ft/lbs	44 Nm	26 ft/lbs	35 Nm
3/8" (9 mm)	21 ft/lbs	28 Nm	16 ft/lbs	21 Nm
5/16" (8 mm)	138 in/lbs	15 Nm	107 in/lbs	12 Nm
1/4" (6 mm)	79 in/lbs	9 Nm	62 in/lbs	7 Nm
#10	24 in/lbs	2.5 Nm	19 in/lbs	2 Nm
#8	21 in/lbs	2 Nm	16 in/lbs	1.5 Nm
#6	10 in/lbs	1 Nm	8 in/lbs	1 Nm
#4	5.5 in/lbs	0.5 Nm	4.3 in/lbs	0.5 Nm

Component identification

The ONEAC FA Power Filter's major components are outlined in the drawing below. The actual component location may differ depending on the filter model and/or the power feeder location (for example, top feed).

Refer to the section "Fuse and suppressor replacement" on page 28 for fuse values for your model filter. Some components can be replaced by a qualified electrician on site and other can only be retrofitted by Chloride Technical Services on site or installed at the factory.

NOTE: Field retrofitting requires that your system power be shut down.

Component identification

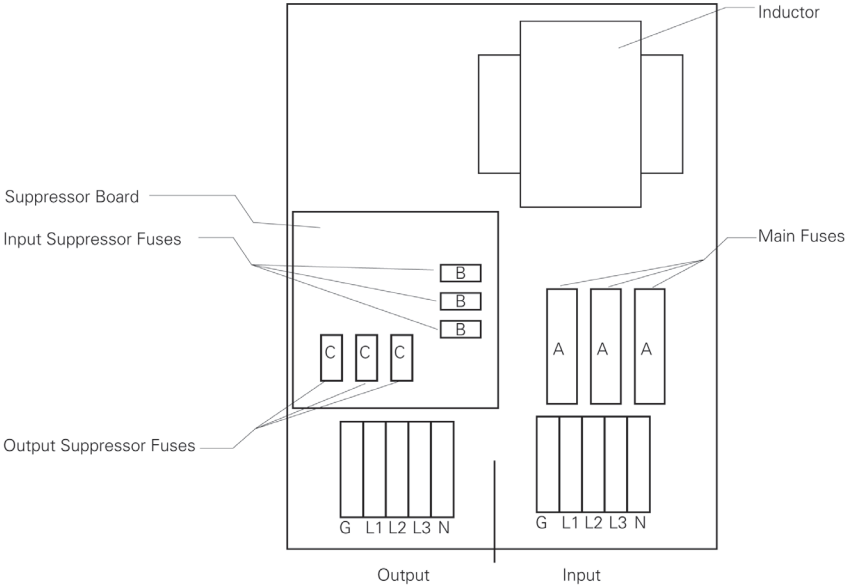

fig. 2. Component identification FA23030 and FA63030

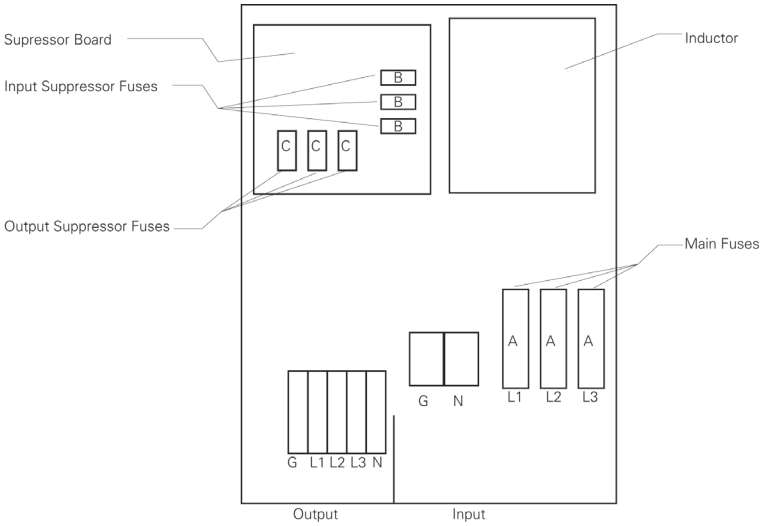

fig. 3. Component identification for FA23060, FA63060, FA23100, and FA63100

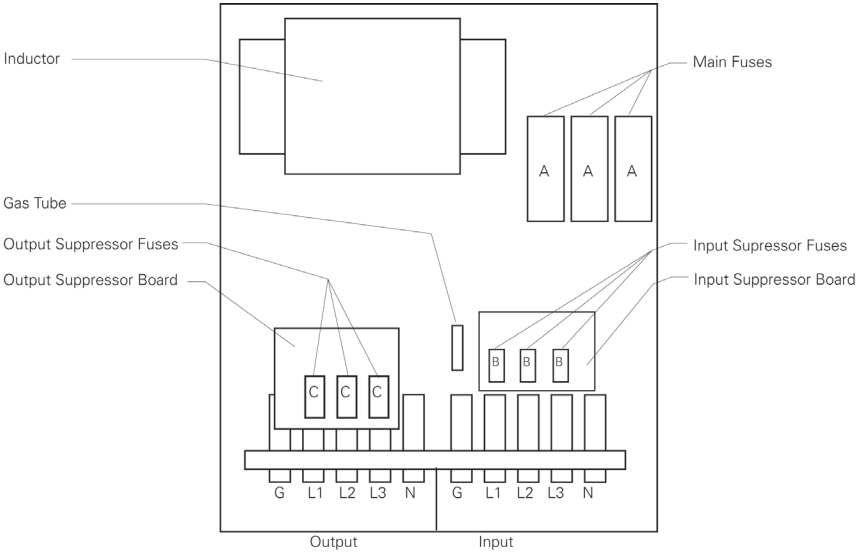

fig. 4. Component identification for FA23200, FA43200, and FA63200

Filter disposal

Once your filter has reached the end of its useful life and it is necessary to dispose of the unit.

Do not discard waste electrical or electronic equipment (WEEE) in the trash. For proper disposal, contact your local recycling/reuse or hazardous waste center.

Dispose of the unit in accordance with local/national recycling or disposal ordinances.

Specifications

FA Power Filter model	FA23030	FA63030	FA23060	FA63060
Part number	026-005	026-075	026-060	026-076
Load current rating (Amps/phase)*	30	30	60	60
Frequency (Hz)	50/60	50/60	50/60	50/60
Enclosure rating**	NEMA 12	NEMA 12	NEMA 12	NEMA 12
Physical				
Dimensions (with bracket) HxWxD - in (mm)	24 x 16 x 9 (610 x 410 x 230)		30 x 20 x 9 (760 x 510 x 230)	
Floor footprint - sq in (sq cm)	144 (943)		180 (1173)	
Ship weight - lbs (kg)	85 (39)		150 (68)	
RF 50 Ω insertion loss (line to load; load to line) 400 kHz to 4 MHz (typical) 100 kHz to 10 MHz (typical 30 kHz to 30 MHz (typical)	 45 db 35 db 35 db	 45 db 35 db 35 db	 45 db 35 db 35 db	 45 db 35 db 35 db
1 kHz forward transfer impedance (Ω)	< 1.0	< 1.0	< 1.0	< 1.0
Efficiency at rated load (%)	> 98	> 98	> 98	> 98
Load power factor range (crest factor)	0.3 leading to 0.3 lagging			
Surge voltage withstand capability	ANSI/IEEE C62.41 Cat A & B, 6 kV/200 & 500 A, 100 kHz ringwave and impulse			
Clamping response time, normal and common modes	instantaneous			
Surge voltage let-through (max) when subject to 6 kV ANSI/IEEE C62.41 Cat. A test	less than 20 V normal mode (L-N), less than 20 V common mode (L-G)			
Overload capability (typically tolerated without degradation	20 times rated output for 0.5 cycle 7.5 times rated output for 1 second 5 times rated output for 10 seconds			
Distortion	< 1% THD added into a resistive load			
Load regulation response time	< 2 msec for a 50% change in load			
Interruption response time	Output voltage will track input voltage in less than 2 msec at power-off and power-on for a single-cycle asynchronous notch.			
Cooling	convection			
Warranty	Five-year materials and workmanship			
Operating environment				
Temperature	+32°F to +104°F (0°C to +40°C)			
Humidity	0-95%, non-condensing			
Elevation - ft (m)	10,000 (3000) ASL			
Safety listings				
Approvals	UL, cUL			

FA Power Filter model	FA23030	FA63030	FA23060	FA63060
Features and options				
Input - output voltage range (3-ph Delta) 190 - 250 380 - 600	 standard NA	 NA standard	 standard NA	 NA standard
Input - output voltage range (3-ph Wye) 190/110 - 250/144 380/220 - 600/346	 standard NA	 NA standard	 standard NA	 NA standard
Input and output termination (hardwired - internal)	standard	standard	standard	standard
Main fuse kit	optional	optional	optional	optional
Suppressor fuse kit	optional	optional	optional	optional
Floor mounting kit	optional	optional	optional	optional

FA Power Filter model	FA23100	FA63100
Part number	026-070	026-077
Load current rating (Amps/phase)*	100	100
Frequency (Hz)	50/60	50/60
Enclosure rating**	NEMA 12	NEMA 12
Physical		
Dimensions (with bracket) HxWxD - in (mm)	30 x 24 x 13 (762 x 610 x 330)	
Floor footprint - sq in (sq cm)	312 (2013)	312 (2013)
Ship weight - lbs (kg)	210 (95)	210 (95)
RF 50 Ω insertion loss (line to load; load to line) 400 kHz to 4 MHz (typical) 100 kHz to 10 MHz (typical 30 kHz to 30 MHz (typical)	 50 db 40 db 30 db	 50 db 40 db 30 db
1 kHz forward transfer impedance (Ω)	< 1.0	< 1.0
Efficiency at rated load (%)	> 98	> 98
Load power factor range (crest factor)	0.3 leading to 0.3 lagging	
Surge voltage withstand capability	ANSI/IEEE C62.41 Cat A & B, 6 kV/200 & 500 A, 100 kHz ringwave and impulse	
Clamping response time, normal and common modes	instantaneous	
Surge voltage let-through (max) when subject to 6 kV ANSI/IEEE C62.41 Cat. A test	less than 20 V normal mode (L-N) less than 20 V common mode (L-G)	
Overload capability (typically tolerated without degradation	20 times rated output for 0.5 cycle 7.5 times rated output for 1 second 5 times rated output for 10 seconds	
Distortion	< 1% THD added into a resistive load	
Load regulation response time	< 2 msec for a 50% change in load	
Interruption response time	Output voltage will track input voltage in less than 2 msec at power-off and power-on for a single-cycle asynchronous notch.	
Cooling	convection	
Warranty	Five-year materials and workmanship	
Operating environment		
Temperature	+32°F to +104°F (0°C to +40°C)	
Humidity	0-95%, non-condensing	
Maximum elevation - ft (m)	10,000 (3000) ASL	
Safety listings		
Approvals	UL, cUL	

FA Power Filter model	FA23100	FA63100
Features and options		
Input - output voltage range (3-ph Delta) 190 - 250 380 - 600	 standard NA	 NA standard
Input - output voltage range (3-ph Wye) 190/110 - 250/144 380/220 - 600/346	 standard NA	 NA standard
Input and output termination (hardwired - internal)	standard	standard
Main fuse kit	optional	optional
Suppressor fuse kit	optional	optional
Floor mounting kit	optional	optional

FA Power Filter model	FA23200	FA43200	FA63200
Part number	026-011	026-012	026-078
Load current rating (Amps/phase)*	200	200	200
Frequency (Hz)	50/60	50/60	50/60
Enclosure rating**	NEMA 12	NEMA 12	NEMA 12
Physical			
Dimensions (with bracket) HxWxD - in (mm)	36x30x17 (914 x762x430)	41x30x17 (1040x762x430)	
Floor footprint - sq in (sq cm)	510 (3268)	510 (3268)	510 (3268)
Ship weight - lbs (kg)	365 (166)	455 (207)	455 (207)
RF 50 Ω insertion loss (line to load; load to line) 400 kHz to 4 MHz (typical) 100 kHz to 10 MHz (typical 30 kHz to 30 MHz (typical)	 50 db 40 db 30 db	 50 db 40 db 30 db	 45 db 35 db 35 db
1 kHz forward transfer impedance (Ω)	< 1.0	< 1.0	< 1.0
Efficiency at rated load (%)	> 98	> 98	> 98
Load power factor range (crest factor)	0.3 leading to 0.3 lagging		
Surge voltage withstand capability	ANSI/IEEE C62.41 Cat A & B, 6 kV/200 & 500 A, 100 kHz ringwave and impulse		
Clamping response time, normal and common modes	instantaneous		
Surge voltage let-through (max) when subject to 6 kV ANSI/IEEE C62.41 Cat. A test	less than 20 V normal mode (L-N), less than 20 V common mode (L-G)		
Overload capability (typically tolerated without degradation	20 times rated output for 0.5 cycle 7.5 times rated output for 1 second 5 times rated output for 10 seconds		
Distortion	< 1% THD added into a resistive load		
Load regulation response time	< 2 msec for a 50% change in load		
Interruption response time	Output voltage will track input voltage in less than 2 msec at power-off and power-on for a single-cycle asynchronous notch.		
Cooling	convection		
Warranty	Five-year materials and workmanship		
Operating environment			
Temperature	+32°F to +104°F (0°C to +40°C)		
Humidity	0-95%, non-condensing		
Maximum elevation - ft (m)	10,000 (3000) ASL		
Safety listings			
Approvals	UL, cUL		

FA Power Filter model	FA23200	FA43200	FA63200
Features and options			
Input - output voltage range (3-ph Delta)			
190 - 250	standard	NA	NA
380 - 480	NA	standard	NA
500 - 600	NA	NA	standard
Input - output voltage range (3-ph Wye)			
190/110 - 250/144	standard	NA	NA
380/220 - 480/277	NA	standard	NA
500/288 - 600/346	NA	NA	standard
Input and output termination (hardwired - internal)	standard	standard	standard
Termination kit			
2 AWG	optional	optional	optional
1/0 AWG	optional	optional	optional
2/0 AWG	optional	optional	optional
4/0 AWG	optional	optional	optional
250 MCM	optional	optional	optional
Main fuse kit	optional	optional	optional
Suppressor fuse kit	optional	optional	optional
Floor mounting kit	optional	optional	optional

Physical views

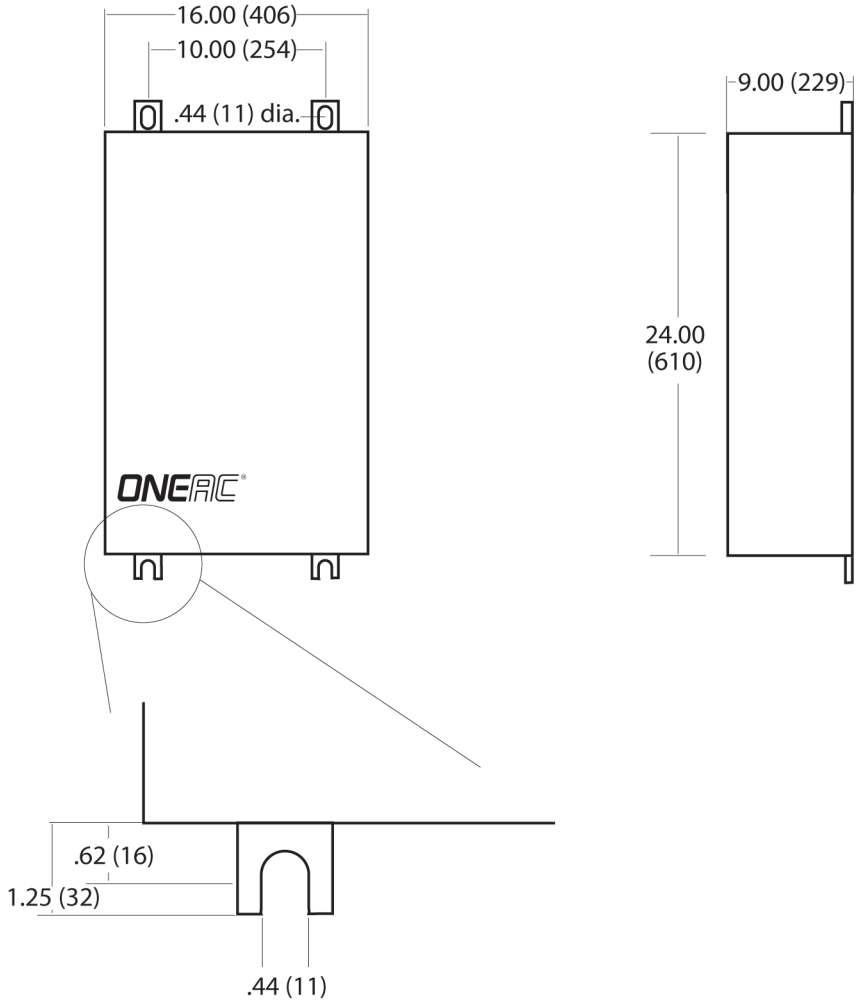

fig. 5. External view FA23030 and FA63030

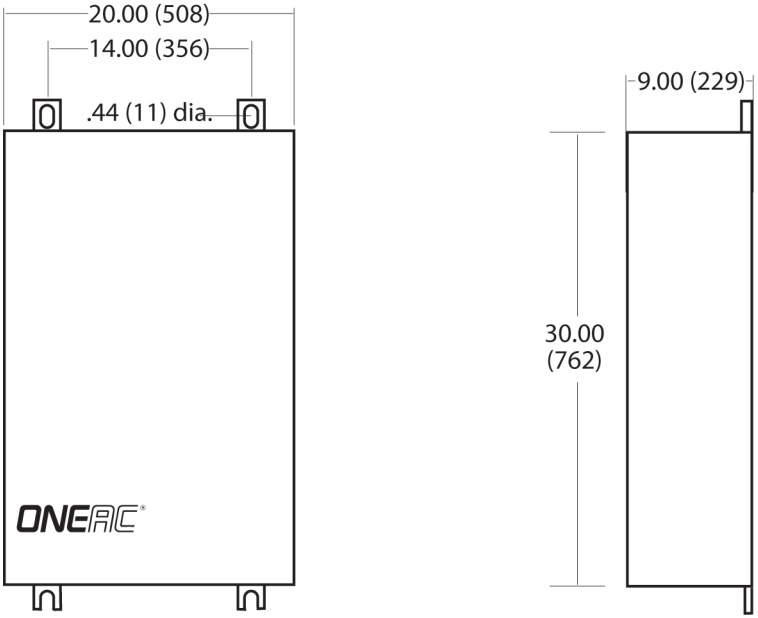

fig. 6. External view FA23060 and FA63060

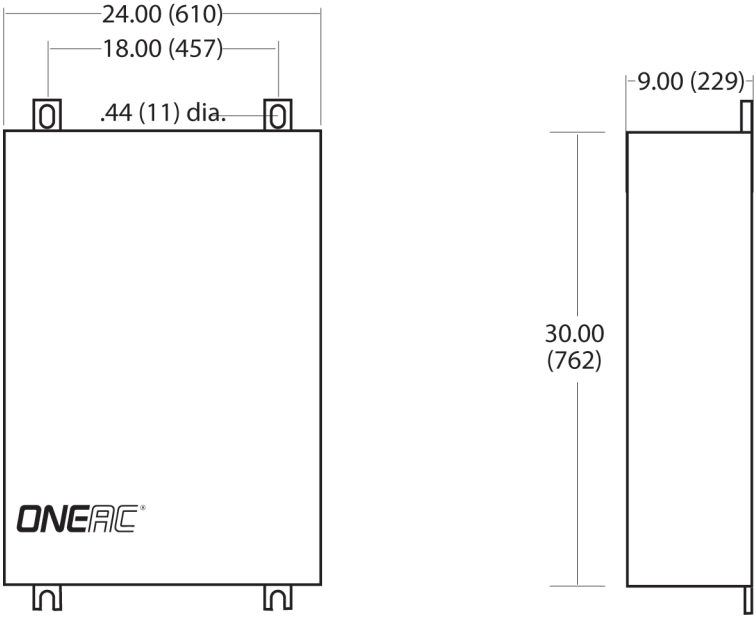

fig. 7. External view FA23100 and FA63100

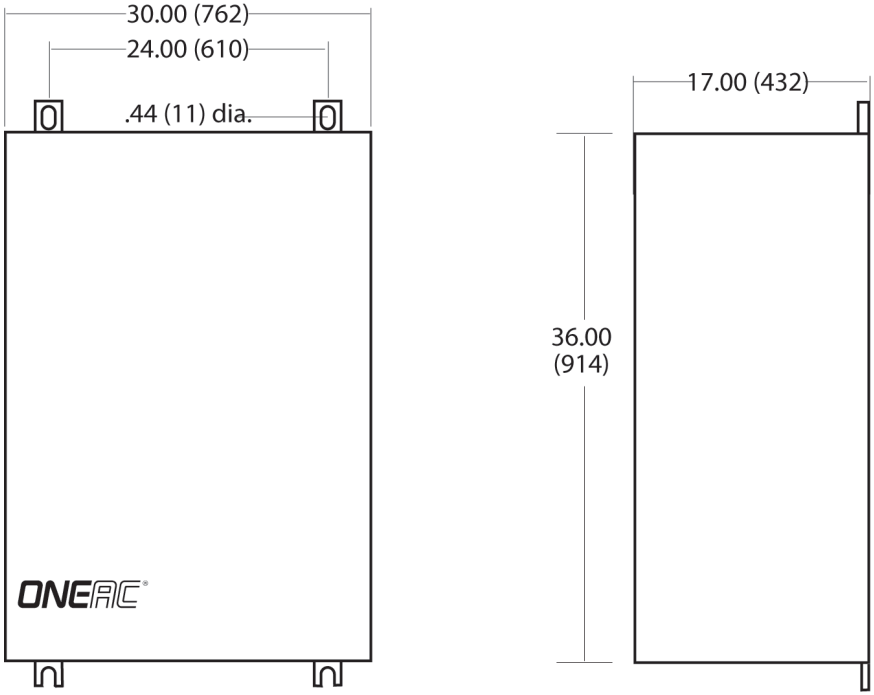

fig. 8. External view FA23200

Maintenance

Maintaining the correct operation of your filter is limited to annually checking the operating voltage and torquing all the connections.

WARNING: *Before proceeding, turn off the power source supplying the filter, at the service disconnect.*

AVERTISSEMENT: *Avant de commencer, éteignez la source d'alimentation alimentant le filtre.*

Follow the chart below for recommended safe working torque specifications.

Bolt/Screw size	Stainless steel		Brass	
1/2" (12 mm)	45 ft/lbs	61 Nm	35 ft/lbs	47 Nm
7/16" (11 mm)	33 ft/lbs	44 Nm	26 ft/lbs	35 Nm
3/8" (9 mm)	21 ft/lbs	28 Nm	16 ft/lbs	21 Nm
5/16" (8 mm)	138 in/lbs	15 Nm	107 in/lbs	12 Nm
1/4" (6 mm)	79 in/lbs	9 Nm	62 in/lbs	7 Nm
#10	24 in/lbs	2.5 Nm	19 in/lbs	2 Nm
#8	21 in/lbs	2 Nm	16 in/lbs	1.5 Nm
#6	10 in/lbs	1 Nm	8 in/lbs	1 Nm
#4	5.5 in/lbs	0.5 Nm	4.3 in/lbs	0.5 Nm

Fuse and suppressor replacement

The FA Series Power Filter requires fuses in some locations. In the unlikely event that a fuse needs to be replaced, this section gives the fuse locations and specifications.

Fuse replacement

WARNING: *Before proceeding, turn off the power source supplying the filter, at the service disconnect.*

AVERTISSEMENT: *Avant de commencer, éteignez la source d'alimentation alimentant le filtre.*

1. Open the filter and locate the fuses.
2. Replace the fuse(s) as needed.
3. Follow the procedure in "Verifying your installation" on page 7.
4. Close the filter.

The ONEAC FA Power Filter's main input and output suppressor fuses (B and A in each diagram) can be replaced using the fuses listed below.

Model	Fuse description	Manufacturer part number		
		Bussman	Littelfuse	Gould Shawmut
FA23030	10 A, 250 V fast acting	FNM 10	FLM 10	
FA63030	10 A, 600 V fast acting	KTK-10	KLK 10	ATM 10
FA23060	10 A, 250 V, fast acting	FNM 10	FLM 10	
FA63060	10 A, 600 V fast acting	KTK-10	KLK 10	ATM 10
FA23100	10 A, 250 V fast acting	FNM 10	FLM 10	
FA63100	10 A, 600 V fast acting	KTK-10	KLK 10	ATM 10
FA23200 input	15 A, 600 V fast acting	KTK-R-15	KLK-R-15	ATMR 15
FA23200 output	10 A, 250 V fast acting	FNM 10	FLM 10	
FA43200 input	15 A, 600 V fast acting	KTK-R-15	KLK-R-15	ATMR 15
FA43200 output	10 A, 600 V fast acting	KTK-10	KLK 10	ATM 10
FA63200 input	15 A, 600 V fast acting	KTK-R-15	KLK-R-15	ATMR 15
FA63200 output	10 A, 600 V fast acting	KTK-10	KLK 10	ATM 10

Fault diagnosis

Blown fuse	Suggested problem
A	output overload
B	failed input suppressor
C	failed output suppressor

NOTE: Equipment may be temporarily operated with failed fuses B and C with reduced protection levels.

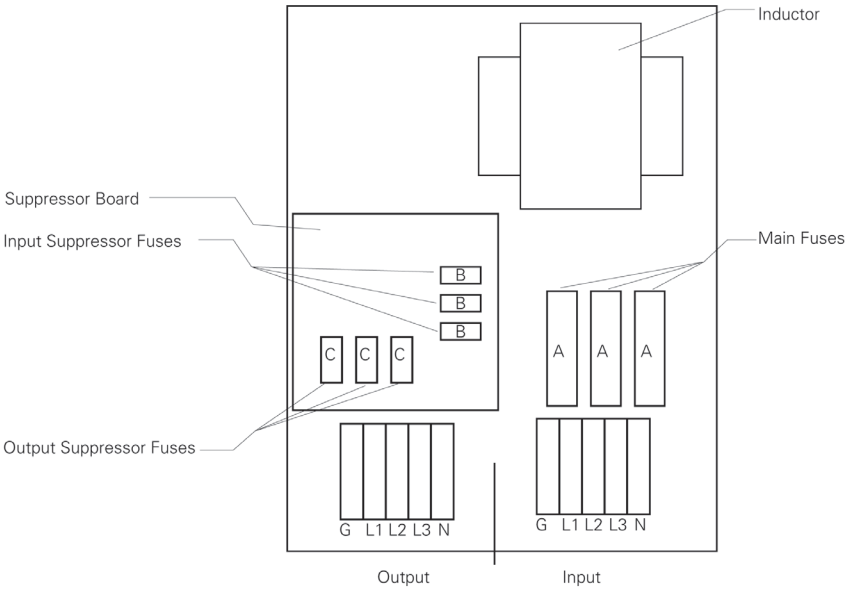

fig. 9. Component identification FA23030 and FA63030

NOTE: The actual physical location of the input and output terminals may differ from what is shown in the above drawing.

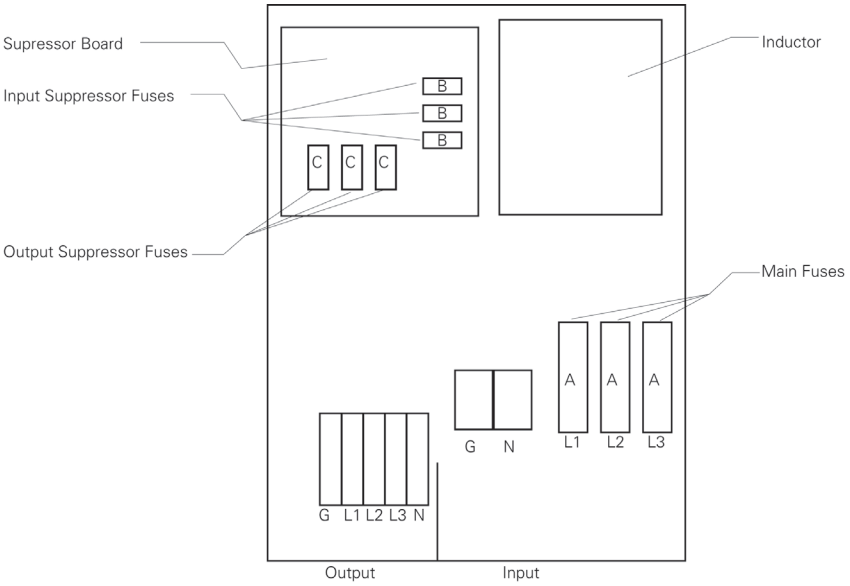

fig. 10. Component identification for FA23060, FA63060, FA23100, and FA63100

NOTE: The actual physical location of the input and output terminals may differ from what is shown in the above drawing.

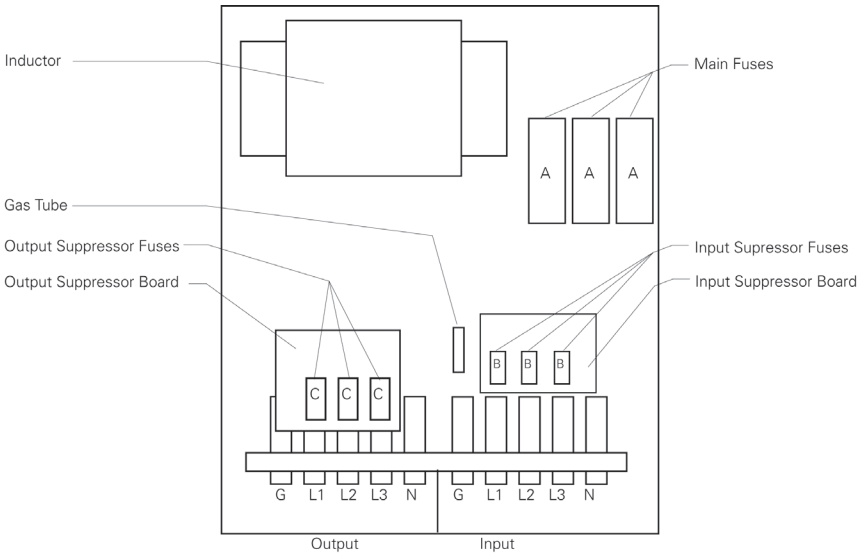

fig. 11. Component identification for FA23200, FA43200, and FA63200

NOTE: The actual physical location of the input and output terminals may differ from what is shown in the above drawing.

Troubleshooting an installation

Problem	Solution
Power at the input with no power at the output.	1. Turn off the power source supplying the filter at the main power source or service disconnect. 2. Check the values specified on the nameplates. Verify that your main power source is correct for the filter's input voltage. 3. Use a voltmeter to check continuity of the main line fuses (A) inside the filter. If any fuses are blown, replace the main line fuse(s).
Main line fuses (A) blow after being replaced.	1. Turn off the service disconnect 2. Verify the supply requirement. *(A blown main fuse suggests an output overload or incorrect branch service voltage.)*
Branch service protection continually blows.	1. Check the inrush characteristics. *High inrush protection is recommended for both the branch service and the main line fuses inside the filter.* 2. If everything seems correct, disconnect the line and ground input wires and then contact Chloride Technical Services.

Chloride offers 24-hour technical support. To contact technical services:

North America: toll free (800) 327-8801 (Opt 3),

local (847) 816-6000 (opt 3)

email: us.service@chloridepower.com

Please check with Technical Services before attempting to return any Chloride product under warranty. If a Chloride product needs repair or replacement, Technical Services issues a Return Material Authorization (RMA) number along with instructions on how to return the product.

RMAs should be directed to:

Chloride Technical Services
27944 North Bradley Road
Libertyville, IL 60048
Attn: RMA_____

Warranty

This Chloride product is warranted to be free from defects in materials and workmanship for five years. This warranty is limited to repairing or replacing, at Chloride's option, any defective component, circuit board, or module contained within the product only when it is returned with an Chloride Return Material Authorization (RMA) number to Chloride or to an Chloride-designated repair facility. In all cases, the customer is responsible for shipping charges to and from Chloride or the Chloride-designated repair facility.

Limitations of warranty

This limited warranty does not cover any losses or damage resulting from shipment to or from the customer, or from improper installation, inappropriate environment, abuse, modifications, adjustments, or unauthorized repair.

For full details of the warranty, see Chloride Warranty, Policy and Procedures (part number 955-053).

Exclusive remedies

Except as set forth herein and except as to title, there are no warranties, express or implied, or any affirmations of fact or promises by Chloride for the products, their merchantability, or fitness for any particular purpose. In no event shall Chloride be liable for lost profits, goodwill, or any other special or consequential damages.

Return procedure

To return the ONEAC FA Power Filter under warranty, contact Chloride for a Return Material Authorization (RMA) number. This number must be marked on the shipping carton and packing slip of the unit returned. The customer is responsible for repair charges or damages incurred in shipment that result from inadequate or improper packing of the product.

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